



ESI

Received:  
12 March, 2017

Accepted:  
10 June, 2017

Published:  
10 June, 2017

Subject Editor:  
Giuseppe Fabrizio  
Turrisi

## Review of the superfamily Evanioidea (Hymenoptera) in Iran with four new records

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**ABSTRACT.** The Evanioidea wasp fauna of Iran is reviewed. The study is based on literature as well as collecting research carried out during 2007-2015 in the East and West-Azərbayjan provinces. The total number of species recorded from Iran is 34 including: Aulacidae (*Pristaulacus*, 4 species), Evaniidae (*Evania*, 2 species and *Brachygaster*, one species) and Gasteruptionidae (*Gasteruption*, 27 species). Four new records from Iran are added: *Brachygaster minutus* (Olivier) (Evaniidae); *Gasteruption goberti* (Tournier), *G. henseni* van Achterberg and *G. undulatum* (Abeille de Perrin) (Gasteruptionidae).

**Key words:** Fauna, Evanioidea, Aulacidae, Evaniidae, Gasteruptionidae, new record, Iran

**Citation:** Lotfalizadeh, H., Masudi-Rad, S. & Mehrvar, A. (2017) Review of the superfamily Evanioidea (Hymenoptera) in Iran with four new records. *Journal of Insect Biodiversity and Systematics*, 3(2), 141–151.

### Introduction

Evanioidea are represented by three families Aulacidae, Evaniidae and Gasteruptionidae. These are parasitoids of larvae of wood-boring wasps and beetles, cockroach oothecae and predator-inquilines of various solitary bees and wasps, respectively (Jennings & Austin, 2000; 2004). These wasps is easily recognized by sharing the metasoma inserted high on the propodeum (Jennings & Austin, 2000, 2004; Turrisi, Jenning & Vilhelmsen, 2009). This superfamily is accepted as monophyletic based on two putative synapomorphies of adults: the dorsal articulation of the metasoma to the mesosoma and the loss of all functional metasomal spiracles except on the seventh

segment (Dowton et al., 1997; Gauld & Bolton 1996; Sharkey, 2007; Turrisi, Jenning & Vilhelmsen, 2009; Sharkey et al., 2012; Deans, Yoder & Dole, 2017).

Iran is located between three zoogeographical regions, Palaearctic, Oriental and Afrotropical and thus includes mixed faunistic characters of these regions. However, Iranian Evanioidea are currently poorly known and there have been no comprehensive recent revisionary attempts, and there are only a few scattered taxonomic papers, in historical order: Semenov (1892) reported *G. caucasicum* (under *G. pedemontanum*) and Hedwig (1957) reported *G. hastator* (under *G. rubricans*). The first study of Evanioidea in

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Iran was made by Tirkari (1975) that reported three species of Gasteruptiidae, two species of Evaniidae and one species of Aulacidae. Madl (1990) studied Aulacidae of Iran; Ghahari (2012) updated the knowledge of Aulacidae with a new addition; finally, Samin and Bagriacik (2012) reported three Gasteruptiidae species from Iran. Recently, van Achterberg and Talebi (2014) described 15 new species of *Gasteruption* from Iran and Turkey, and also reported 16 new records from Iran. Faunistic study of the families Aulacidae, Evaniidae and Gasteruptiidae in the adjacent countries were infrequently done such as Yildirim (2008) on Evaniidae and Yildirim et al. (2004) on *Gasteruption* of Turkey; and Jennings and Krogmann (2009) Gasteruptiidae of UAE.

This number is believed to be underestimated, suggesting the need for an extensive investigation and more research for a better knowledge of the Iranian Evanioidea.

#### Material and methods

Collection of Evanioidea was done during 2007–2015, starting from mid-May to October. Investigated areas were East and West-Azərbayjan provinces (northwest of Iran) with a total of 10 localities: Urmia, Tabriz, Jolfa, Ahar, Azarshahr, Khosroshar, Arasbaran, Khodafarin, Marand and Mamaghan.

Specimens were collected mostly by Malaise traps. The specimens were extracted from the Malaise traps and sorted weekly and then stored in 70% ethanol solution. All the collected specimens were identified using available identification keys (Tirkari, 1975; Deans & Huben, 2003; Turrisi, 2007; van Achterberg & Talebi, 2014; Deans, Yoder & Dole, 2017). Reported species from Iran were included from the literature records to provide a first list of all species of the superfamily Evanioidea.

#### Results

In total 64 Evanioidea specimens were examined including one species of Aulacidae, two species of Evaniidae and 10 species of Gasteruptiidae. Taking into account the previous records, the Iranian Evanioidea includes a total of 34 species: four Aulacidae, three Evaniidae and 27 Gasteruptiidae; four species are newly recorded from Iran.

#### Aulacidae

We found only one species of Aulacidae. It is a small group of evanoid parasitic wasps which includes 182 species in three genera *Aulacus* Jurine (65 species), *Pristaulacus* Kieffer (115 species), and *Panaulix* Benoit (2 species) (Smith, 2001; Turrisi, 2007; Turrisi, Jenning & Vilhelmsen, 2009). Only four species of the genus *Pristaulacus* have been recorded from Iran.

#### *Pristaulacus barbeyi* (Ferrière, 1933)

**Note.** This species has already been reported from West-Azərbayjan province in Iran (Ghahari, 2012). It is distributed in north Africa, south Europe and Turkey (Turrisi, 2007, 2013a, 2013b).

#### *Pristaulacus compressus* (Spinola, 1808)

**Material examined:** Iran, East-Azərbayjan, Khosroshah, 37°58'28"N, 46°02'55"E, 1346m, 14 June 2014, H. Lotfalizadeh leg., 1♀.

**Note.** Recorded from Iran (Fars) by Madl (1990). Turrisi (2007, 2011) reviewed the taxonomy and the distribution of the *P. compressus* species group and listed some European and Middle East countries as distribution areas of this species.

#### *Pristaulacus galitae* (Gribodo, 1879)

**Note.** It was reported from East-Azərbayjan province (Ghahari, 2012) and distributed in Europe, north Africa and Turkey (Turrisi, 2007, 2013b).

#### *Pristaulacus gloriator* (Fabricius, 1804)

**Note.** A male of this species has been described from Iran as *Pristaulacus holzschuhi* by Madl (1990) and later

synonymized under *P. gloriator* by Turrisi (2007). It is collected from Gilan province in Iran (Madl, 1990; Turrisi, 2007) and also recorded from Europe and Turkey (Turrisi, 2007, 2013b).

#### Evaniidae

In the studied collection we found three species of two genera from the family Evaniidae. The specimens from the genus *Brachygaster* is collected for the first time from Iranian fauna.

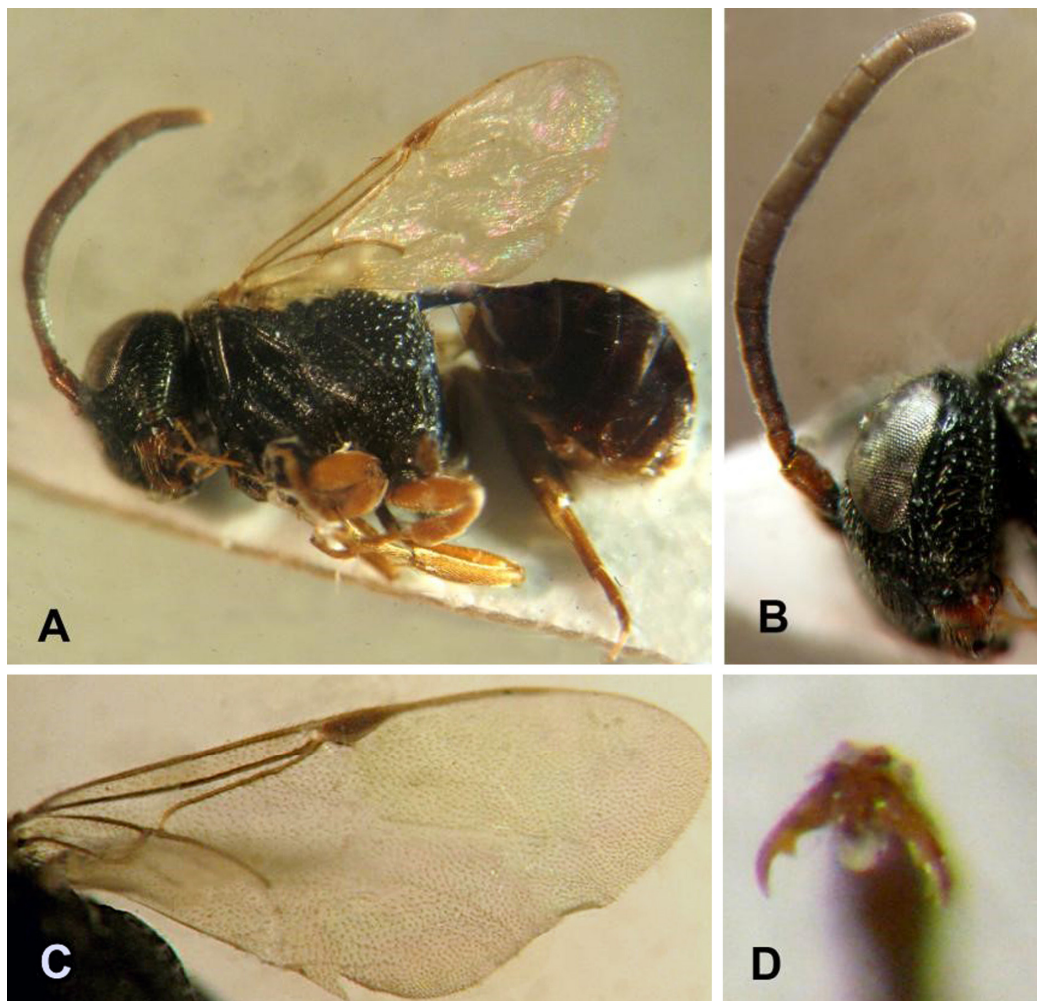
*Brachygaster minuta* (Olivier, 1791) (Fig. 1)

**Material examined:** Iran, East-Azarbaijan, Khodafarin, Tatar, 39°8'17.29"N, 46°57'39.90"E,

400m, 17 May 2015, Malaise trap, H. Lotfalizadeh leg., 1♂.

**Note.** It occurs in Europe as a common species (Crosskey, 1951; Deans & Huben, 2003; Deans, 2005, Žikić, Petrović & Ćetković, 2016) but it was found for first time in Iran (East-Azarbaijan province).

Diagnostic features of this species are briefly reported below: body densely foveolate; notauli often absent; fore wing with 3 closed cells, without 1<sup>st</sup> marginal cell and with 3 closed cells (costal, basal and sub basal), 4RS absent and r-m present as spectral veins in fore wing (Fig. 1C); apical tooth of tarsal claw prominent (Fig. 1D).



**Fig. 1.** *Brachygaster minuta*: **A.** Male in lateral view, **B.** Head and antenna in lateral view, **C.** Fore wing, **D.** Claws with subapical tooth.

***Evania cribrata* Semenow, 1892**

**Material examined:** Iran, East-Azarbaijan, Ahar, 38°38'39.00"N, 47°04'12.00"E, 1360m, 24 June 2014, S. Masudi-Rad leg., 1♀. East-Azarbaijan, Arasbaran, 38°46'44.88"N, 46°58'52.25"E, 1556m, 17 May 2015, H. Lotfalizadeh leg., 1♂. East-Azarbaijan, Tabriz, Azarshahr, 37°27'36.00"N, 45°51'00.00"E, 1348m, 19 August 2015, S. Masudi-Rad leg., 1♂. East-Azarbaijan, Mamaghan, 37°49'49.59"N, 45°59'20.95"E, 1330m, 2 July 2015, S. Masudi-Rad leg., 1♂.

**Note.** *Evania cribrata* was reported as *Evania schlettereri* Kohl, 1892 by Tirgari (1975) from Iran. It is reported from several provinces of Iran including East-Azarbaijan, Isfahan, Khuzestan, Mazandaran, West-Azarbaijan and Yazd (Tirgari, 1975). This species is generally not very common, but it was previously recorded from Caucasus and Transcaucasia (Deans, 2005).

***Evania dimidiata* (Spinola, 1838)**

**Material examined:** Iran, East-Azarbaijan, Ahar, 38°38'39.00"N, 47°04'12.00"E, 1360m, 24 June 2014, S. Masudi-Rad leg., 1♀, 3♂♂. East-Azarbaijan, Marand, 38°25'39.83"N, 45°45'43.4"E, 1350m, 10 August 2007, H. Lotfalizadeh leg., 4♀♀, 4♂♂. East-Azarbaijan, Khosroshah, 37°58'28"N, 46°02'55"E, 1346m, 2 October 2012, H. Lotfalizadeh leg., 3♀♀ & 1♂. East-Azarbaijan, Azarshahr, 37°27'36.00"N, 45°51'00.00"E, 1348m, H. Lotfalizadeh leg., 2♀♀. East-Azarbaijan, Mamaghan, 37°49'49.59"N, 45°59'20.95"E, 1330m, 7 May 2015, S. Masudi-Rad leg., 1♂, 2♀♀. East-Azarbaijan, Khodafarin, Tatar, 39°8'17.29"N, 46°57'39.90"E, 2500m, 1 July 2015, H. Lotfalizadeh leg., 5♀♀, 8♂♂. East-Azarbaijan, Tabriz, Azarshahr, 37°27'36.00"N, 45°51'00.00"E, 1348m, S. Masudi-Rad leg., 7 June 2015, 1♂. West-Azarbaijan, Urmia, Kahriz, 37°53'35.50"N, 45°00'25.20"E, 1321m, Malaise trap, 18 August 2014, H. Lotfalizadeh leg., 1♂, 2♀♀.

**Note.** It was reported as *E. caspia* Eichwald, 1830 from Iran (Ghahari & Deans, 2010), but it is synonym of *E. dimidiata* (Deans,

2005). This species was the most abundant evaniid in the studied area and is widely distributed in the northern and central provinces of Iran including East-Azarbaijan, Golestan, Guilan, Isfahan, Markazi, Mazandaran, Semnan and Tehran (Ghahari & Deans, 2010). It was recorded from Africa, Middle East and Central Asia (Deans, 2005).

**Family Gasteruptionidae**

Only one genus of this family, *Gasteruption* Latreille, 1796, is recorded from Iran. In total 10 valid species of the genus *Gasteruption* are recognized and three species are new reports for Iran. This family with about 500 nominal species is a distinctive family of wasps easily recognized by a slender, subclavate metasoma, elongate, neck-like propleura, and clavate hind tibia (Jennings & Austin, 2002; Aguiar et al., 2013).

***Gasteruption agrenum* van Achterberg, 2014**

**Note.** Southeastern Palaearctic species (van Achterberg & Talebi, 2014), reported from Iran by van Achterberg and Talebi (2014) and collected from East-Azarbaijan, Isfahan, Tehran, Qazvin provinces. For detailed description and figures see van Achterberg and Talebi (2014), p. 52, figs 14–28.

***Gasteruption assectator* (Linnaeus, 1758)**

**Material examined:** Iran, West-Azarbaijan, Urmia, Kahriz, 37°53'35.50"N, 45°00'25.20"E, 1321m, Malaise trap, 18 August 2014, H. Lotfalizadeh leg., 2♂♂, 2♀♀.

**Note.** Widely distributed in the Holarctics, common. Recently reported from Iran (van Achterberg & Talebi, 2014). Collected from Alborz, East-Azarbaijan and Qazvin provinces (van Achterberg & Talebi, 2014), and we found in West-Azarbaijan province.

***Gasteruption caucasicum* (Guérin-Méneville, 1844)**

**Note.** It is distributed in Europe and Caucasus (van Achterberg & Talebi, 2014). Reported from Iran by Semenov (1892) and Kieffer (1904, 1912) as *G. pedemontanum* and

van Achterberg and Talebi (2014), collected in northern provinces including Tehran, Gilan, Golestan and Qazvin.

***Gasteruption coriacoxale* van Achterberg, 2014**

**Material examined:** Iran, East-Azarbaijan, Marand, 38°25'39.83"N, 45°45'43.49"E, 1350m, H. Lotfalizadeh leg., 9 August 2009, 1♀.

**Note.** Recently described from Turkey and Iran (van Achterberg & Talebi, 2014); collected from Tehran, Alborz, Qazvin and Fars provinces and was found in East-Azarbaijan. For detailed description and figures see van Achterberg and Talebi (2014), p. 68, figures 80–95.

***Gasteruption diversipes* (Abeille de Perrin, 1879)**

**Note.** It is distributed in the Palaearctic region (Samin & Bagriacik, 2012). Reported from Iran (West-Azarbaijan province) by Samin and Bagriacik (2012) but van Achterberg and Talebi (2014) believe its presence needs confirmation since it may concern the similar and more common *G. schlettereri* Magretti.

***Gasteruption dolichoderum* Schletterer, 1889**

**Note.** Collected from Tehran and Kerman provinces in Iran by van Achterberg and Talebi (2014). It is reported in East and southeastern Palaearctic (van Achterberg & Talebi, 2014).

***Gasteruption goberti* (Tournier, 1877)**

**Material examined:** Iran, West-Azarbaijan, Urmia, Kahriz, 37°53'35.50"N, 45°00'25.20"E, 1321m, Malaise trap, H. Lotfalizadeh leg., 18 August 2014, 2 ♂♂.

**Note.** Newly recorded from Iran (West-Azarbaijan province). It was reported from Turkey (van Achterberg & Talebi, 2014) and its occurrence in the northwest of Iran and near to Turkey borders could be ordinary, because it belongs to Irano-Turanian region. This species is distributed in Europe and Caucasus (van Achterberg & Talebi, 2014).

***Gasteruption hastator* (Fabricius, 1804)**

**Note.** Palaearctic species. Reported from Iran by Hedwig (1957) (Sistan-o Baluchestan province) and Tirgari (1975) (Khuzestan and Mazandaran provinces) as *G. rubricans* Guérin-Méneville, 1844. Recently collected from Gilan, Kerman, Kohkiluyeh-Boyer Ahmad and East-Azarbaijan provinces (van Achterberg & Talebi, 2014).

***Gasteruption heminitidum* van Achterberg, 2014**

**Note.** This recently described species has been collected from Tehran, Alborz and Qazvin provinces (van Achterberg & Talebi, 2014). For detailed description and figures see van Achterberg and Talebi (2014), p. 95, figures 205–219.

***Gasteruption henseni* van Achterberg, 2014**

**Material examined:** Iran, East-Azarbaijan, Arasbaran, 38°46'44.88"N, 46°58'52.25"E, 1556m, H. Lotfalizadeh leg., 27 May 2015, 2♀♀.

**Note.** Previously known only from Turkey (van Achterberg & Talebi, 2014), it is a new record for Iran. For detailed description and figures see van Achterberg and Talebi (2014), p. 99, figures 220–234.

***Gasteruption insidiosum* Semenov, 1892**

**Note.** It is distributed in East Europe, Iran, Turkey (van Achterberg & Talebi, 2014). Samin and Bagriacik (2012) reported it as *G. erythrostomum* (Dahlbom, 1834) from East-Azarbaijan province and recently it was collected from Alborz and Qazvin provinces (van Achterberg & Talebi, 2014).

***Gasteruption ischnolaimum* van Achterberg, 2014**

**Note.** This species is currently known only from Iran and Turkey (van Achterberg & Talebi, 2014). Reported from Iran (Alborz province) by van Achterberg and Talebi (2014). For detailed description and figures see van Achterberg and Talebi (2014), p. 106, figures 250–258.

***Gasteruption jaculator* (Linnaeus, 1758)**

**Material examined:** Iran, West-Azarbaijan, Urmia, Kahriz, 37°53'35.50"N, 45°00'25.20"E, 1321m, Malaise trap, H. Lotfalizadeh leg., 18 August 2014, 1♂ & 2♀♀.

**Note.** It is widely distributed in the Palaearctic region (van Achterberg & Talebi, 2014). Tirgari (1975) reported this species from Mazandaran and Alborz provinces and we add West-Azarbaijan.

***Gasteruption laticeps* (Tournier, 1877)**

**Note.** It is reported from Europe and Turkey (van Achterberg & Talebi, 2014). Tirgari (1975) reported this species as *Gasteruption foveolum* Szépligeti, 1903 from Iran.

***Gasteruption merceti* Kieffer, 1904**

**Material examined:** Iran, East-Azarbaijan, Arasbaran, 38°46'44.88"N, 46°58'52.25"E, 1556m, H. Lotfalizadeh leg., 17 May 2015, 1♂. Iran, West-Azarbaijan, Urmia, Kahriz, 37°53'35.50"N, 45°00'25.20"E, 1321m, Malaise trap, H. Lotfalizadeh leg., 18 August 2014, 1♂.

**Note.** Recorded from central and south Europe, north Africa and Middle East (van Achterberg & Talebi, 2014). In Iran it is reported from Alborz, Qazvin, Mazandaran, Gilan, Teheran, Kerman and West-Azarbaijan provinces (van Achterberg & Talebi, 2014). We add East-Azarbaijan and province.

***Gasteruption minutum* (Tournier, 1877)**

**Material examined:** Iran, East-Azarbaijan, Basmenj, 37°59'00.96"N, 46°29'31.92"E, 1791m, H. Lotfalizadeh leg., 2 August 2013, 1♀. Iran, West-Azarbaijan, Urmia, Kahriz, 37°53'35.50"N, 45°00'25.20"E, 1321m, Malaise trap, H. Lotfalizadeh leg., 18 August 2014, 1♀.

**Note.** It is known from Europe and Turkey (van Achterberg & Talebi, 2014). Reported from Iran (Kerman and Isfahan provinces) by van Achterberg and Talebi (2014). We add northwestern provinces, East and West-Azarbaijan.

***Gasteruption nigrapiculatum* van Achterberg, 2014**

**Note.** Recently described from Iran by van Achterberg and Talebi (2014), collected from Alborz and Qazvin provinces. In the Middle East, beside Iran, it is also known from Jordan (van Achterberg & Talebi, 2014). For morphological characters and figures see van Achterberg and Talebi (2014), p. 126 and figures 331-345.

***Gasteruption nigrescens* Schletterer, 1885**

**Note.** It is present in Europe and Turkey (van Achterberg & Talebi, 2014). Recently reported in Iran from Alborz, Qazvin, East-Azarbaijan and Kokiloye-Boyer Ahmad provinces (van Achterberg & Talebi, 2014).

***Gasteruption opacum* (Tournier, 1877)**

**Material examined:** Iran, East-Azarbaijan, Basmenj, 37°59'00.96"N, 46°29'31.92"E, 1791m, H. Lotfalizadeh leg., 6 August 2013, 1♀. Iran, West-Azarbaijan, Urmia, Kahriz, 37°53'35.50"N, 45°00'25.20"E, 1321m, Malaise trap, H. Lotfalizadeh leg., 18 August 2014, 1♂.

**Note.** This European species was recently reported from Iran: Alborz, Qazvin, Tehran and North Khorasan provinces (van Achterberg & Talebi, 2014). We collected from northwestern provinces, East and West-Azarbaijan.

***Gasteruption phragmiticola* Saure, 2006**

**Note.** It is reported from Europe and Turkey (van Achterberg & Talebi, 2014). Recorded from Fars province in Iran (van Achterberg & Talebi, 2014).

***Gasteruption pseudolaticeps* van Achterberg, 2014**

**Note.** Recorded from north Africa, Middle East and central Asia (van Achterberg & Talebi, 2014). It was reported from Iran by van Achterberg and Talebi (2014). According to van Achterberg and Talebi (2014), the record of *G. foveolum* by Tirgari (1975) could be referred to the very similar *G. pseudolaticeps*. Known from northwestern provinces of Iran: Alborz, Qazvin and



Tehran. For detailed description and figures see van Achterberg and Talebi (2014), p. 143, figures 413–430.

***Gasteruption punctifrons* van Achterberg, 2014**

**Note.** It was reported from Middle East and southern Europe (van Achterberg & Talebi 2014). Collected from Alborz and Tehran provinces (van Achterberg & Talebi, 2014). For detailed description and figures see van Achterberg and Talebi (2014), p. 149, figures 431–445.

***Gasteruption schlettereri* Magretti, 1890**

**Note.** Recorded from southeastern Europe and Middle East (van Achterberg & Talebi, 2014). van Achterberg and Talebi (2014) reported this species from Alborz, Fars, Qazvin provinces.

***Gasteruption schmideggeri* van Achterberg & Saure, 2014**

**Note.** This species is distributed in the south of Europe and Middle East (van Achterberg & Talebi, 2014). Recently reported from Iran: Qazvin province (van Achterberg & Talebi, 2014). For detailed description and figures see van Achterberg and Talebi (2014), p. 156, figures 462–477.

***Gasteruption tournieri* Schletterer, 1885**

**Note.** Reported from Europe and Turkey (van Achterberg & Talebi, 2014). Samin and Bagriacik (2012) recorded it from East-Azerbaijan province.

***Gasteruption undulatum* (Abeille de Perrin, 1879)**

**Material examined:** Iran, East-Azerbaijan, Khosroshah, 37°58'28"N, 46°02'55"E, 1346m, H. Lotfalizadeh leg., 3 July 2014, 3♂♂.

**Note.** Reported from central and south Europe and Turkey (van Achterberg & Talebi, 2014). It is newly recorded from Iran.

***Gasteruption variolosum* (Abeille de Perrin, 1879)**

**Material examined:** Iran, East-Azerbaijan, Khosroshah, 37°58'28"N, 46°02'55"E, 1346m,

H. Lotfalizadeh leg., 17 July 2009, 1♂. Marand, 38°25'39.83"N, 45°45'43.49"E, 1350m, H. Lotfalizadeh leg., 9 August 2006, 1♀.

**Note.** This species is distributed in south Europe and Turkey (van Achterberg & Talebi, 2014). van Achterberg and Talebi (2014) reported this species from Tehran province and we found it in East-Azerbaijan province.

**Discussion**

This is the second review of Evanioidea of Iran after long time (Tirgari, 1975). The knowledge of Evanioidea from Iran mostly derives from scattered record, with a few exceptions, e.g. Tirgari (1975) and van Achterberg and Talebi (2014). In the present contribution, 34 species from three families are listed, including four *Pristaulacus* (Aulacidae), two *Evania*, one *Brachygaster* (Evaniidae) and 27 *Gasteruption* (Gasteruptionidae).

Among the recorded species, four are newly reported from Iran: *Brachygaster minutus*, *G. goberti*, *G. henseni* and *G. undulatum* for first time. The genus *Brachygaster* (restricted to the Old World), is recorded from Iran for the first time.

Gasteruptionidae and Gasteruption of Iran with 27 species include about 80% of known species of Iranian Evanioidea. While it includes 500 species in three genera in the World (van Achterberg, & Talebi, 2014). Based on our review about 15% of the nominal genera and about 3% of nominal species of the superfamily Evanioidea were recorded from Iran (Table 1).

The number of Evanioidea is probably higher than presently known, since several species from neighboring countries can be expected to occur also in Iran. As for most of the collections which have been made in the northern parts of Iran and the poor sampling coverage of southern and central parts, could be increase the number of Iranian species.

**Table 1.** Number of genera and species of the families of Evanioidea in Iran in comparison to the world.

Family	Number of Genera		Number of Species	
	World	Iran	World	Iran
Aulacidae <sup>1</sup>	3	1	218	4
Evanioidea <sup>2</sup>	20	2	436	3
Gasteruptiidae <sup>3</sup>	3	1	500	27
<b>Total</b>	<b>26</b>	<b>4</b>	<b>1154</b>	<b>34</b>

<sup>1</sup> after Turrise, Jenning & Vilhelmsen (2009); <sup>2</sup> after Deans (2005); <sup>3</sup> after van Achterberg, & Talebi (2014).

**Table 2.** List of the Iranian species of Evanioidea after this study (\* collected in this research, \*\* new record for Iran).

Family	Genus	Species	Distribution in Iran (Provinces)
<b>Aulacidae</b>	<i>Pristaulacus</i>	<i>P. barbeyi</i> (Ferrière)	West-Azarbaijan
		<i>P. compressus</i> (Spinola)*	East-Azarbaijan
		<i>P. galitae</i> (Gribodo)	East-Azarbaijan
		<i>P. gloriator</i> (Fabricius)	Gilan
<b>Evanioidea</b>	<i>Evania</i>	<i>E. cribrata</i> Semenow*	East-Azarbaijan, Isfahan, Khuzestan, Mazandaran, West-Azarbaijan, Yazd
		<i>E. dimidiata</i> (Spinola)*	East-Azarbaijan, Golestan, Guilan, Isfahan, Markazi, Mazandaran, Semnan, Tehran
	<i>Brachygaster</i>	<i>Brachygaster minutus</i> (Olivier) **	East-Azarbaijan
<b>Gasteruptiidae</b>	<i>Gasteruption</i>	<i>G. agrenum</i> van Achterberg	East-Azarbaijan, Isfahan, Tehran, Qazvin
		<i>G. assectator</i> (Linnaeus)*	Alborz, East-Azarbaijan, Qazvin
		<i>G. caucasicum</i> (Guérin-Méneville)	Tehran, Gilan, Golestan, Qazvin
		<i>G. coriacoxale</i> van Achterberg*	Tehran, Alborz, Qazvin, Fars
		<i>G. diversipes</i> (Abeille de Perrin)	West-Azarbaijan
		<i>G. dolichoderum</i> Schletterer	Tehran, Kerman
		<i>G. goberti</i> (Tournier)**	West-Azarbaijan
		<i>G. hastator</i> (Fabricius)	Sistan-o Baluchestan, Khuzestan, Mazandaran, Gilan, Kerman, Kohkiluyeh-Boyer Ahmad, East-Azarbaijan
		<i>G. heminitidum</i> van Achterberg	Tehran, Alborz, Qazvin
		<i>G. henseni</i> Achterberg**	East-Azarbaijan
		<i>G. insidiosum</i> Semenov	Alborz, Qazvin, East-Azarbaijan
		<i>G. ischnolaimum</i> van Achterberg	Alborz
		<i>G. jaculator</i> (Linnaeus)*	Mazandaran, Alborz, West-Azarbaijan
		<i>G. laticeps</i> (Tournier)	Unknown locality
		<i>G. merceti</i> Kieffer*	Alborz, Qazvin, Mazandaran, Gilan, Teheran, Kerman and West-Azarbaijan, East-Azarbaijan
		<i>G. minutum</i> (Tournier)*	Kerman, East-Azarbaijan, Isfahan, West-Azarbaijan
		<i>G. nigrapiculatum</i> van Achterberg	Alborz, Qazvin
		<i>G. nigrescens</i> Schletterer	Alborz, Qazvin, East-Azarbaijan, Kohkiluyeh-Boyer Ahmad
		<i>G. opacum</i> (Tournier)*	Alborz, Qazvin, Tehran, North Khorasan, East-Azarbaijan, West-Azarbaijan
		<i>G. phragmiticola</i> Saure	Fars
		<i>G. pseudolaticeps</i> van Achterberg	Alborz, Qazvin, Tehran
		<i>G. punctifrons</i> van Achterberg	Alborz, Tehran
		<i>G. schlettereri</i> Magretti	Alborz, Fars, Qazvin
<i>G. schmidegeri</i> van Achterberg & Saure	Qazvin		
<i>G. tournieri</i> Schletterer	East-Azarbaijan		
<i>G. undulatum</i> (Abeille de Perrin)**	East-Azarbaijan		
<i>G. variolosum</i> (Abeille de Perrin)*	Tehran		



It must be noted that all species are known from only a few records (Table 2) and thus their distribution in Iran are still not satisfactorily known.

### Acknowledgments

The authors are grateful to East-Azərbayjan Agricultural and Natural Resources Research Center and Azərbaycan Shahid Madani University for supporting this research and three anonymous reviewers for their valuable comments on the earlier version of this paper.

### Conflict of Interests

The authors declare that there is no conflict of interest regarding the publication of this paper.

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## مروری بر زنبورهای بالاخانواده Evanioidea در ایران همراه با چهار گزارش جدید

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تاریخ دریافت: ۲۲ اسفند ۱۳۹۵، تاریخ پذیرش: ۲۰ خرداد ۱۳۹۶، تاریخ انتشار: ۲۰ خرداد ۱۳۹۶

**چکیده:** مروری بر فون زنبورهای متعلق به بالاخانواده Evanioidea انجام گرفت. این تحقیق براساس منابع و نمونه‌های جمع‌آوری شده طی سال‌های ۱۳۸۶ تا ۱۳۹۴ از استان‌های آذربایجان شرقی و غربی انجام گرفت. بر این اساس تعداد کل گونه‌های متعلق به این بالاخانواده شامل ۳۴ گونه می‌باشد که عبارتند از خانواده‌های Aulacidae (جنس *Pristaulacus* با ۴ گونه)، Evaniidae (جنس *Evania* با ۲ گونه و جنس *Brachygaster* با یک گونه) و خانواده Gasteruptiidae (جنس *Gasteruption* با ۲۷ گونه). از این میان چهار گونه شامل *Brachygaster minutus* (Olivier) از خانواده Evaniidae، *Gasteruption goberti* (Tournier)، *G. undulatum* (Abeille de Perrin) و *G. henseni* van Achterberg از خانواده Gasteruptiidae برای فون ایران گزارش جدید می‌باشند.

**واژگان کلیدی:** فون، Evanioidea، Aulacidae، Evaniidae، Gasteruptiidae، گزارش جدید، ایران